

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. **(Currently Amended)** A method for preparing a drug eluting medical device comprising:

applying first to said device at least one layer of a drug **incorporated in a material capable of eluting said drug;**

applying second to said device a polymer having active functional groups capable of chemically binding biological molecules, characterised in that said second applying step takes place in a single step by means of cold plasma methods, **and**

depositing biological molecules on the surface of said polymer, said biological molecules having stable reactive functional groups.

Claim 2. **(Original)** A method according to claim 1, in which said polymers are chosen from among polymers having amine groups, carboxyl groups and sulphhydryl groups.

Claim 3. **(Original)** A method according to claim 2 in which the precursors of said polymers having amine groups are chosen from among allylamine, heptylamine, aliphatic amines and aromatic amines.

Claim 4. **(Original)** A method according to claim 2 in which the precursors of said polymers having carboxylic groups are chosen from between acrylic acid and methacrylic acid.

Claim 5. **(Original)** A method according to claim 2, in which the precursors of said polymers having sulphhydryl groups are chosen from among volatile mercaptans.

Claim 6. **(Previously Presented)** A method according to claim 1, in which said cold plasma methods comprise cold plasma produced under vacuum using discontinuous or continuous technology.

Claim 7. **(Original)** A method according to claim 6, in which said cold plasma

under vacuum is generated at a pressure which may vary between 0.01 and 10 mbar, at a power of between 1 and 500 W and for a period of time of not more than 30 minutes.

Claim 8. **(Previously Presented)** A method according to claim 1, in which said cold plasma methods consist in cold plasma produced at atmospheric pressure.

Claim 9. **(Previously Presented)** A method according to claim 1 in which the precursor of said polymer is in the form of a gas.

Claim 10. **(Previously Presented)** A method according to claim 1, in which the precursor of said polymer is in the form of a vapour.

Claim 11. **(Previously Presented)** A method according to claim 1, in which said polymer is applied in the form of film with a thickness of between 0.01 and 10 microns.

Claim 12. **(Cancelled).**

Claim 13. **(Previously Presented)** A method according to claim 1, in which said drug is chosen from the group consisting of anti-inflammatory, anti-proliferative and anti-migratory drugs and immunosuppressive agents.

Claim 14. **(Original)** A method according to claim 13, in which said drug is 4-[(4-methyl-1-piperazinyl)methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-phenyl]benzamide methanesulphonate.

Claim 15. **(Currently Amended)** A method according to claim 1, in which the drug is incorporated in said layer in a material capable of eluting said drug, and said drug-eluting material is a second polymer selected from the group consisting of ~~from~~ among hydrophobic hydrocarbons, polyamides, polyacrylates and polymethacrylates.

Claim 16. **(Original)** A method according to claim 15, in which said hydrophobic hydrocarbons are chosen from among polystyrene, polyethylene, polybutadiene and polyisoprene.

Claim 17. **(Currently Amended)** A method according to claim 15, in which said second polymer is chosen from among polyhydroxybutylmethacrylate, polyhydroxyethylmethacrylate, where appropriate in combination with polybutadiene.

Claim 18. **(Previously Presented)** A method according to claim 1, in which said

drug is applied by means of immersion in a suitable solution or deposited by spraying.

Claim 19. **(Original)** A method according to claim 18 in which said drug eluting polymer is deposited in the form of film with a thickness of between 0.5 and 20 microns.

Claim 20. **(Previously Presented)** A method according to claim 1, in which when said drug is an anti-inflammatory, it is present in quantities of between 0.001 mg and 10 mg per device.

Claim 21. **(Previously Presented)** A method according to claim 1, in which when said drug is an anti-proliferative, it is present in quantities of between 0.0001 and 10 mg per device.

Claim 22. **(Previously Presented)** A method according to claim 1, in which when said drug has an anti-migratory action, it is present in quantities of between 0.0001 mg and 10 mg per device.

Claim 23. **(Previously Presented)** A method according to claim 1, in which when the drug is an immunosuppressant, it is present in quantities of between 0.0001 mg and 10 mg per device.

Claim 24. **(Previously Presented)** A method according to claim 1 in which when said drug is 4-[(4-methyl-1-piperazinyl)methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-phenyl]benzamide methanesulphonate, it is present in quantities of between 0.001 mg and 10 mg per device.

Claim 25. **(Cancelled).**

Claim 26. **(Currently Amended)** A method according to claim 1, [[25,]] in which said biological molecules are chosen from among anti-thrombotic substances and hyaluronic acid.

Claim 27. **(Original)** A method according to claim 26, in which said biological molecules are heparin.

Claim 28. **(Previously Presented)** A method according to claim 26, in which said biological molecules are deposited by immersing the medical device in an aqueous solution containing said biological molecules in a concentration of 0.01% to 1% by weight.

Claim 29. **(Previously Presented)** A method according to claim 1, also comprising a preliminary step of cleaning/washing said medical device.

Claim 30. **(Original)** A method according to claim 29, in which said preliminary cleaning/washing step is followed by a step of pretreatment of said medical device to promote adhesion of the drug incorporated where appropriate in an eluting polymer to this device.

Claim 31. **(Previously Presented)** A method according to claim 1, also comprising the application of further biodegradable polymer layers over said biological molecule layer.

Claim 32. **(Currently Amended)** A method according to claim 1, comprising in succession the application of at least one first layer of 4-[(4-methyl-1-piperazinyl)methyl]-N-[4-methyl-3-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]-phenyl]benzamide methanesulphonate included where appropriate in a polymer to the surface of said medical device, the application by cold plasma of at least one second layer of polymer of allylamine, and the bonding of heparin to said at least one second layer and application of at least one third layer of biodegradable polymer onto said heparin.

Claims 33-41 **(Cancelled)**.

Claim 42. **(Currently Amended)** A method according to claim 1, further comprising immersing said device including said polymer having reactive active functional groups in an aqueous bath containing at least one biological molecule so as to chemically bind said biological molecule to said functional groups.